Auditor Going-Concern Opinions and Management Forecasts of Financially Distressed Firms

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Abstract:
We examine the relation between auditor going-concern opinions and management forecasts of financially distressed firms. We find that managers of firms more likely to receive going-concern opinions issue more optimistic forecasts, indicating that these managers strategically use their forecasts to try to reduce the likelihood of receiving going-concern opinions. With regard to auditors’ reliance on management forecasts, we find that auditors incorporate management forecasts when evaluating a firm’s going-concern status. However, auditors do not appear to be misled by management forecasts, as auditors rely more on forecasts issued by managers with higher prior accuracy, and do not over-weight management forecasts when issuing going-concern opinions. Overall, our finding indicates that both managers’ forecasting strategies and auditors’ response to management forecasts are consistent with a rational expectation model.

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1. Introduction

Auditors are required to assess a firm’s going-concern status as part of every audit engagement. The resulting going-concern opinions impose significant economic costs on the client firms and affect the decisions and welfare of many interested parties, including investors, suppliers, creditors, and customers (e.g. Mutchler 1984; Elliott and Jacobson 1987; Loudder et al. 1992). When evaluating a firm’s going-concern status, auditors need to consider the prospective financial information provided by management (SAS No. 59). Management earnings forecasts can provide important prospective information regarding a firm’s future ability to generate profits and cash flow, and thus may be informative to auditors. However, the potential usefulness of management forecasts to auditors may motivate managers to bias their forecasts, which in turn may influence how auditors incorporate management forecasts when evaluating a firm’s going-concern status. In this study, we provide empirical evidence on the relation between auditor going-concern opinions and management forecasts for financially distressed firms, by examining both managers’ forecasting behavior and auditors’ use of management forecasts.

We first investigate whether managers vary their forecasting behavior with the likelihood of receiving going-concern opinions. Going-concern opinions are very costly to firms, as these opinions are generally accompanied by significant negative market reactions (e.g., Loudder et al. 1992; Blay and Geiger 2001) and increased difficulty in doing business with suppliers, customers and resource providers (e.g., Mutchler 1984).
Given the potential usefulness of management forecasts to auditors when assessing firms’ ability to continue as going concerns, we expect managers of financially distressed firms to have incentive to issue optimismistically biased earnings forecasts in order to reduce the likelihood of receiving going-concern opinions. Consistent with this, we find that management forecasts are more optimismistically biased when firms are more likely to receive a going-concern opinion. This optimistic bias is economically significant, as, on average, managers are 18 percent more likely to issue an optimistic forecast when the probability of receiving a going-concern opinion increases by one standard deviation.

We next examine whether auditors use management forecasts appropriately when assessing a firm’s going-concern status using a two step approach. First, we investigate whether auditors use management forecasts when evaluating a firm’s going concern status. Given that firms which are more likely to receive going-concern opinions tend to issue optimistic forecasts, it is unclear whether auditors will rely on their forecasts when evaluating such firms’ going-concern status. Second, if auditors use forecast information, the next question is whether they are misled by those generally optimismistically biased forecasts. Our results show that auditors are less likely to issue a going-concern opinion when management earnings forecasts become greater, after controlling for known determinants of a going-concern opinion, such as size, bankruptcy scores and past performance. Economically, when management forecasts increase by one standard deviation, auditors are one percent less likely to issue a going-concern opinion. Such an impact is large considering that the mean probability of receiving a going concern opinion in our sample is only 3.6 percent.
As our second step to evaluate the appropriateness of auditors’ use of management forecasts, we examine whether auditors differentiate management forecasts with different credibility or weight them all the same. Measuring management forecast credibility by prior forecast optimism, we find that auditors significantly discount less credible forecasts, consistent with the argument that auditors rationally distinguish among forecasts of differing credibility. To further test whether auditors are misled by the optimistically biased management forecasts, we compare the weight auditors assign to management forecasts when issuing going-concern opinions with the weight of management forecasts implied in a bankruptcy prediction model. We find no significant difference between the coefficients on forecasts in the going concern model and the bankruptcy model, again consistent with auditors relying on management forecasts properly.

In summary, we find that managers’ forecasting strategy and auditors’ reliance on management forecasts are consistent with a rational expectation’s equilibrium. That is, managers optimistically bias their forecasts to reduce the likelihood of receiving a going-concern opinion. Auditors use management forecasts when assessing a firm’s going-concern status, but they do not appear to be misled by those forecasts.1

Our paper contributes to both management forecast and auditor going concern literature. Prior research finds management forecasts are informative to various information users, such as investors and analysts (e.g., Pownall, et al. 1993; Baginski and Hassell 1990). Our study provides first-time evidence that management earnings

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1 At first glance, our findings seem paradoxical. Why would managers bias their forecasts if this strategy does not fool auditors? We argue that because managers cannot credibly signal the absence of forecast bias, auditors discount all management forecasts. As a result, the rational response for managers is to optimistically bias their forecasts.
forecasts are also useful to auditors when assessing a firm’s going-concern status. Moreover, we find that auditors’ usage of management forecasts appears to motivate managers to optimistically bias their forecasts. Prior literature has documented that managers of financially distressed firms are more likely to issue optimistic forecasts (e.g., Frost, 1997; Koch, 2003). However, as far as we know, no previous studies have empirically examined specific incentives behind management forecast optimism of financially distressed firms.² Our study documents that avoiding going-concern opinions provides important incentives for managers to issue optimistically biased forecasts.

Regarding the auditor going concern literature, professional standards (SAS No. 34, AICPA 1981; SAS No. 59, AICPA 1988) explicitly require auditors to consider prospective financial information provided by management, as well as the information credibility, when evaluating a firm’s going-concern status. Prior research has examined whether auditors use management’s prospective information, such as plans to raise additional capital, corporate structure, and new product offerings, when making going concern decisions, and the results are mixed (Mutchler 1985 and 1997; Behn et al. 2001). However, no previous studies have investigated the informativeness of firms’ expected future earnings even though making profits is crucial for firms to avoid bankruptcy. Our study shows that management forecasts of firm future earnings are an important input when auditors evaluate a firm’s going-concern status. Moreover, prior studies take the prospective information provided by managers as exogenous even though auditors’ reliance on the information can affect its quality. We examine both parties’ behaviors

² Frost (1997) and Koch (2003) argue that optimistic forecasts are issued to reduce the likelihood of acquisition, hostile takeover and job losses although no empirical evidence regarding these incentives has been provided.
and empirically show that auditors’ usage of management forecasts motivates managers to optimistically bias their forecasts, but auditors are not misled by the bias.

The remainder of the paper is organized as follows. Section 2 provides a review of relevant prior research, and develops hypotheses. Sample selection criteria and descriptive statistics are discussed in Section 3. Section 4 presents the empirical results and Section 5 concludes the paper.

2. Literature Review and Hypotheses Development

2.1 Managers’ Incentive to Avoid Going-Concern Opinions Using Management Forecasts

Prior research has documented that managers issue optimistically and pessimistically biased forecasts for various incentives. For example, managers tend to issue pessimistic forecasts to avoid litigation risk (Skinner, 1994; Francis et al., 1994) and to guide market earnings expectations downward to beatable targets (Matsumoto, 2002; Cotter et al., 2006). Managers are likely to issue optimistic forecasts in anticipation of disposing of stock or options (Rogers and Stocken, 2005). For financially distressed firms, studies find managers tend to issue good news or upward biased forecasts (Frost 1997; Koch 2003). They generally argue that managers of distressed firms issue biased forecasts to reduce the probability of bankruptcy, acquisition, hostile takeover and job losses (Frost 1997), or because their firms may not exist long enough to face the institutional penalties for inaccurate disclosures (Koch 2003). A going-concern opinion imposes significant economic costs on a firm. Previous research shows that firms receiving going-concern opinions experience negative market reactions (Loudder et al. 1992; Blay and Geiger 2001), and have significantly negative stock returns in the
following 12 months (Kausar et al. 2009). It is argued that a going-concern opinion makes suppliers, customers and resource providers more reluctant to do business with a firm troubled enough to receive a going-concern opinion, which, in turn, results in additional hardships for the firm (Mutchler 1984; Elliott and Jacobson 1987; Menon and Swartz 1987). In addition, firms receiving going-concern opinions are also more likely to subsequently fail, supporting a “self-fulfilling prophecy” (i.e., the issuance of the going-concern opinion may itself precipitate a firm’s failure because of its impact on current and potential investors, creditors, suppliers and customers.) (Garsombke and Choi 1992; Geiger et al. 1998). As a result, we expect managers of financially distressed firms to have strong incentives to avoid a going-concern opinion from auditors.

Making profits in the future is crucial for a financially distressed firm to stay viable. If a firm is expected to earn profits in the future, the firm can use the profits to repay its debt and to recover from its financial difficulties. However, if a distressed firm is expected to continue to have losses in the future, the losses are likely to drag the firm into deeper financial troubles and increase the firm’s likelihood to go bankrupt. As a result, expected future profitability will be informative to assess the firms’ going-concern status. Management forecasts provide information regarding a firm’s future profitability, and thus can be useful for auditors when assessing the firm’s going-concern status.

Given the significant costs associated with a going-concern opinion and the potential usefulness of management forecasts to the going-concern status assessment, we expect that managers will have incentives to optimistically bias their earnings forecasts. This leads to our H1, stated in alternative form.
H1: Managers of financially distressed firms more likely to receive going-concern opinions issue more optimistic forecasts than managers less likely to receive going-concern opinions.

2.2 Auditors’ Reliance on Management Forecasts When Assessing Going-Concern Status

Auditors need to consider factors that both cast doubts on and mitigate concerns regarding a firm’s going-concern status when issuing a going-concern opinion. Prior research finds factors that call into question the client’s continued existence (contrary information) including firm size, financial conditions, auditor report uncertainty, previous going-concern status, and defaults on debt (e.g. Chen and Church 1992; Mutchler 1985; Mutchler et al. 1997; Louwers 1998; Carey et al. 2008). Specifically, prior research has documented that firms are more like to receive a going-concern opinion if they are small, default on debt, perform poorly, have longer audit report lag, and receive a going-concern opinion in the previous year.

Regulation standards such as SAS No. 34 and SAS No. 59 require auditors to assess a variety of management’s plans that might mitigate doubts concerning the firm’s going-concern status. Prior studies have examined whether auditors use various pieces of information provided by managers when assessing a firm’s going-concern status. For example, Behn et al. (2001) examines four specific mitigating factors as indicated in SAS No. 59 - management plans to issue equity, plans to borrow additional funds, plans to reduce spending, and plans to dispose of assets. They find that auditors are less likely to issue going-concern opinions to firms disclosing plans to issue equity and to borrow additional funds. Mutchler (1985) and Mutchler et al. (1997) examine whether mitigating factors, measured as the positive news items from the Management Discussion and Analysis (MD&A) section in the annual reports (Mutchler 1985), or from the Wall Street
Neither study finds any association between positive news and going-concern reports.

None of the prior studies, however, have examined whether auditors consider management earnings forecasts in the going-concern reporting process. Expected future profitability is a crucial determinant for a firm’s going-concern status because the fundamental goal of the firms is to earn profits. Management earnings forecasts may reveal managers’ private information about future performance that auditors do not have. As a result, management forecasts can be important input for auditors when assessing firms’ going-concern status. Consistent with this, in the interviews with sixteen audit partners from Big Eight accounting firms, Mutchler (1986) finds that when making going-concern decisions, auditors identify management forecasts as an important factor to consider, especially when the forecast is accurate. However, if managers optimistically bias their forecasts to reduce the likelihood of getting going-concern opinions, auditors may conclude that the management forecasts are not informative about firms’ future profitability and thus do not rely on those forecasts at all. The above arguments lead to our second hypothesis, stated in alternative form:

H2: Auditors are less likely to issue going-concern opinions as management earnings forecasts become greater.

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3 Items considered to be good news in Mutchler (1985) are line of credit available, successful new product, increase in R&D expenditure, sale of common stock, issue of new debt, forgiveness of debt including preferred dividends, restructuring of debt, waivers obtained for violation of debt covenants, and obtained employee and supplier concessions. News in Mutchler et al. (1997) is categorized as financing and credit (e.g., securities offerings), corporate structure (e.g., mergers), bankruptcy (e.g., subsidiary filing for Chapter 11), management (e.g., new CEO, CEO resigns), corporate stock (e.g., trading halted), business prospects (e.g., new product offered), legal (e.g., major litigation), and accounting (e.g., changes in accounting principles). Then 14 senior-level or above auditors are asked to indicate whether the news included in each category represents a positive or negative event.
The potential optimistic bias in management forecasts also raises the possibility that auditors do not use management forecasts appropriately when making going-concern decisions. Auditors may naively follow the biased management forecasts and thus over-weight the forecasts. Alternatively, auditors may be too conservative about the informativeness of management forecasts and thus under-weight the forecasts. SAS No. 34 and SAS No. 59 explicitly require auditors to evaluate the credibility of the prospective financial information when using this information in their decisions:

“The auditor’s consideration should be based on knowledge of the entity, its business, and its management and should include (a) reading of the prospective financial information and the underlying assumptions and (b) comparing prospective financial information in prior periods with actual results and comparing prospective information for the current period with results achieved to date.” (SAS No. 59)

If auditors assess the credibility of management forecasts and adjust their usage accordingly, we expect auditors to rely more on the forecasts issued by more credible managers. In other words, management forecasts will be more informative to auditors, on average, if managers were able to meet or beat their own forecasts before. These arguments lead to our third hypothesis, stated in alternative form:

H3a: Auditors rely more on earnings forecasts issued by credible managers than forecasts issued by less credible managers.

An alternative way to assess the appropriateness of auditors’ usage of management forecasts is to use a bankruptcy prediction model as a benchmark. We use subsequent bankruptcy as the benchmark because an auditor’s going-concern opinion reflects the auditor’s assessment about a company’s ability to continue functioning as a business entity for at least 12 months. Regulators, clients, and the public often view a company bankruptcy without a prior going-concern opinion as an audit failure or as a
form of auditor reporting error (e.g. McKeown et al. 1991; Geiger et al. 2005; Carey et al. 2008). If auditors use management forecasts properly when assessing firms’ going-concern status, the weight auditors put on management forecasts should be similar to the weight on forecasts implied in a bankruptcy prediction model. The above arguments lead to our final hypothesis, stated in the alternative form:

H3b: The weight auditors assign to management forecasts when making going-concern decisions is significantly different from the weight on management forecasts implied in a bankruptcy prediction model.

3. Sample Selection, Main Variable Definitions and Descriptive Statistics

3.1. Sample Selection

We collect our data from Audit Analytics (auditor reports), First Call (management guidance, actual earnings, and analyst variables), and Compustat (financial statement variables). We begin with all financially distressed firms with auditor reports available on Audit Analytics and are covered by Compustat for fiscal years 2000 through 2008, which results in an initial sample of 27,498 firm-year observations. Following prior studies (Reynolds and Francis 2001; DeFond et al. 2002; Li 2009), financially distressed firms are defined as reporting either negative net income or negative operating cash flows during the current fiscal year. We next require firms to be covered by the First Call database, which reduces the sample to 22,463 firm-year observations. We then remove observations without necessary financial information from Compustat, resulting in a sample of 20,384 firm-year observations. This sample is used to calculate the probability of receiving a going concern opinion which we will discuss in detail in section 4.

To obtain earnings forecast information, we require firms to make at least one point or range forecast during the period beginning on the first day of the firm’s fiscal
year and ending on the date the auditor signs-off on the financial report for that year. This requirement reduces our sample to 4,113 firm-year observations. We then limit our sample to those forecasts made for the next fiscal year, which results in 1,064 firm-year observations with 39 observations receiving going-concern opinions. We only examine forecasts for the next year because a going concern opinion is intended for the next 12 months. This sample is used to test whether auditors are less likely to issue a going-concern opinion when managers issue higher earnings forecasts. To test whether managers are more likely to issue optimistically biased earnings forecasts when the likelihood of receiving a going concern opinion is higher, we require data on analyst following and actual earnings for the next year from the First Call database, which yields a sample of 690 firm-year observations. Table 1 summarizes the sample attrition process.

3.2 Main Variable Definitions and Descriptive Statistics

There are four main variables in this study: auditor actual going-concern opinions for fiscal year $t$ ($GC$), predicted going-concern opinions for fiscal year $t$ ($PREDICTGC$), management earnings forecasts for fiscal year $t+1$ ($FORECAST$), and management forecast optimism for fiscal year $t+1$ ($OPTIMISTIC$). $GC$ is equal to one if the auditor issues a going-concern opinion for fiscal year $t$, and zero otherwise. $PREDICTGC$ is the predicted probability that a firm receives a going-concern opinion from its auditor (see section 4.1.). $FORECAST$ equals management’s earnings per share (EPS) forecast for year $t+1$, scaled by stock price at the end of year $t$. $OPTIMISTIC$, which is equal to the difference between management’s EPS forecast and the actual earnings for year $t+1$, is
equal to one if actual earning is less than the forecast (optimistically biased), and zero otherwise.

As Figure 1 illustrates, we consider management forecasts for year $t+1$ that are issued from the beginning of year $t$ to the date of the auditors’ report for year $t$. We focus on management forecasts for year $t+1$ since they provide useful prospective information to auditors. We use the forecast window before the auditors’ report date to ensure that auditors have that information when they make going-concern decisions. If management issued more than one forecast for year $t+1$, we use the averaged forecast.4 For our first hypothesis, we expect that management is more likely to issue an optimistically biased forecast for year $t+1$ when its firm is more likely to receive a going-concern opinion for year $t$, thus $PREDICTGC$ is expected to be positively associated with $OPTIMISTIC$. For our second hypothesis, we expect that an auditor will be less likely to issue a going-concern opinion for year $t$ to a firm issuing a higher earnings forecast for year $t+1$, so $GC$ is expected to be negatively associated with $FORECAST$.5

Table 2 presents descriptive statistics for firms issuing optimistically biased earnings forecasts vs. those issuing unbiased forecasts (left columns), and the going-concern firms vs. clean opinion firms (right columns). The results in the left-hand columns suggest that firms issuing optimistically biased forecasts have a significantly higher likelihood of receiving going-concern opinions (0.057 compared to 0.040 for non-optimistic forecast firms), which is consistent with our Hypothesis 1 that managers are more likely to issue optimistically biased forecasts when their firm is more likely to

4 Our results do not change if we use the last forecast instead of the average.
5 We also use a dichotomous variable to differentiate positive forecasts from negative forecasts, where positive forecast is equal to one if the EPS forecast is greater than zero, 0 otherwise. Our results show that positive forecast is also negatively associated with GC (coefficient = -1.752, $X^2 = 12.870$, $p$-value <0.01).
receive a going concern opinion. The results in the right columns show that going-concern firms generally have lower earnings forecasts (0.003 compared to 0.039 for non-going concern firms), and this difference is significant. Thus, the univariate results are consistent with Hypothesis 2 that auditors are less likely to issue going-concern opinions to distressed firms when the managers issue higher earnings forecasts for the next fiscal year.

Table 2 also reports the descriptive statistics of variables that we expect to be associated with going-concern opinions and optimistically biased management forecasts; we include these control variables in our multivariate tests and discuss their expected relations with going-concern opinions and management forecasts in Section 4. In general, going-concern firms are smaller, financially weaker, and less likely to issue new debt in the following year. In addition, going concern firms have longer audit report lag, and are more likely to have received a going-concern opinion in the prior year. Compared with firms issuing unbiased forecasts, firms issuing optimistic forecasts are more likely to have reported a loss in the prior year, have larger increases in debt, and are less likely to have a Big N auditor.

----------------- Insert Table 2 here ------------------

4 Research Design and Main Results

4.1. Manager’s incentive to issue optimistic earnings forecasts

4.1.1. Research model

To test our first hypothesis that managers are more likely to issue optimistically biased earnings forecasts when their firms have a higher likelihood of receiving a going-concern opinion, we estimate the following logistic regression model:
OPTIMISTIC = $b_0 + b_1PREDICTGC + b_2SIZE + b_3PROBANKZ +$
$b_4LEVERAGE + b_5PRLOSS + b_6CHGDT + b_7BIG N +$
$b_8NEWDEBT + b_9ANALYSTS + \text{Year Dummies}$ \hspace{1cm} (1)

where our test variable $PREDICTGC$ is estimated from the following logistic regression model that explains going-concern opinions:

$GC = b_0 + b_1SIZE + b_2PROBANKZ + b_3LEVERAGE + b_4PRLOSS +$
$b_5CHGDT + b_6BIG N + b_7REPORTLAG + b_8NEWDEBT +$
$b_9PRIORGC + \text{Year Dummies}$ \hspace{1cm} (2)

In Model (2), $GC$ is an indicator variable that is equal to one if a firm receives a going-concern opinion for year $t$, and zero if the firm receives a clean opinion for year $t$. Model (2) is estimated using all firm-year observations with the necessary data ($N = 20,384$). The untabulated results show that the model is highly significant with good explanatory power (pseudo $R^2 = 53.4\%$). All variables are significant in the direction consistent with prior literature. The predicted value from this model is our measure of the likelihood of receiving a going-concern opinion ($PREDICTGC$), and we expect it to be positively associated with the likelihood of issuing optimistic earnings forecasts ($OPTIMISTIC$).

We control for various variables that are likely to affect management forecasts optimism in Model (1). We include $SIZE$ because earnings forecasts of large firms are less optimistic (Ajinkya et al. 2005). We measure $SIZE$ as the natural logarithm of total sales and expect it to be negatively associated with forecast optimism. We control for financial distress using $PROBANKZ$, $LEVERAGE$, $CHGDT$, and $PRLOSS$. $PROBANKZ$ is the probability of bankruptcy score from Zmijewski (1984), with higher values indicating a higher probability of bankruptcy. $LEVERAGE$ is measured as total liabilities divided by

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6 We will explain the going concern model in detail in section 4.2, and Table 2 summarizes the variables.
total assets, and CHGDT is measured as the change in long-term debt divided by total assets. PRLOSS is an indicator variable equaling to 1 if the company reported negative net income in year t-1, 0 otherwise. We expect each of them to be positively associated with OPTIMISITC because Koch (2003) finds firms are more likely to issue upward biased forecasts as the distress intensifies. We include auditor type (BIG N) because audit quality is expected to be associated with the quality of disclosure (Ajinkya et al. 2005; Feng et al. 2009). We also include ANALYSTS since management forecasts are more accurate when the firm is followed by more analysts. BIG N is a dichotomous variable, which equals one if the auditor is Big 5(4) auditor, 0 otherwise. ANALYSTS equals to the natural logarithm of total number of analysts following. BIG N and ANALYSTS are expected to be negatively associated with forecast optimism. Finally, we control for whether firms issue new equity in the following year (NEWEQUITY) as prior study finds managers are likely to issue optimistic forecasts in anticipation of issuing stocks (Roger and Stocken 2005). We expect NEWEQUITY to be positively associated with OPTIMISITC.

4.1.2. Logistic regression results for optimistic management forecast

The regression results on the association between the predicted probability of receiving a going-concern opinion and optimistically biased management forecasts are reported in Table 3. H1 predicts a positive relationship between management forecast optimism and the likelihood of receiving a going-concern opinion. Consistent with H1, we find that coefficient on PREDICTGC is positive and significant ($X^2 = 8.111$, $p$-value < 0.01), suggesting that firms having a higher probability of receiving going-concern opinions are more likely to issue optimistic earnings forecasts. This association is also
economically significant. Specifically, firms are 18 percent more likely to issue
optimistic forecasts when the probability of receiving a going-concern opinion increases
by one standard deviation. This impact is the largest among all independent variables.

Turning to control variables, larger firms, firms without a prior year loss and
firms with larger increases in debt, are more likely to issue optimistic earnings forecasts.
Firms with Big N auditors are less likely to issue optimistic forecasts, indicating the
monitoring role of auditors.

----------Insert Tables 3 here----------

4.2. Auditors’ reliance on management forecasts

4.2.1. Research model

To test our second hypothesis that auditors are less likely to render going-concern
opinions for firms issuing higher earnings forecasts for the next period, we estimate the
following logistic regression model:

\[
GC = b_0 + b_1\text{FORECAST} + b_2\text{SIZE} + b_3\text{PROBANKZ} + b_4\text{LEVERAGE} + \\
b_5\text{PRLOSS} + b_6\text{CHGDT} + b_7\text{BIG N} + b_8\text{REPORTLAG} + \\
b_9\text{NEWDEBT} + b_{10}\text{PRIORG C} + \text{Year Dummies} \tag{3}
\]

where \(GC\) is an indicator variable that is equal to one if a firm receives a going-concern
opinion for year \(t\), and zero if the firm receives a clean opinion for year \(t\). This model is
similar to Model (2) except that the test variable, \(\text{FORECAST}\), is included. \(\text{FORECAST}\)
is management’s EPS forecasts for year \(t+1\), scaled by stock price at the end of year \(t\).
The additional variables in the model are intended to control for other factors that could
affect auditor going-concern decisions. We discuss these control variables below.

Prior research finds that company size is negatively associated with going-
concern opinions even after controlling for the relation between size and bankruptcy
(McKeown et al. 1991; Mutchler et al. 1997). Thus we expect SIZE to be negatively associated with GC. We control for financial distress using PROBANKZ, LEVERAGE, CHGDT, and PRLOSS. PROBANKZ, the probability of bankruptcy score from Zmijewski (1984), is found to be positively associated auditor going concern opinions (e.g. Geiger et al. 1998; DeFond et al. 2002). Chen and Church (1992) and Mutchler et al. (1997) find that debt covenant violations are positively related to the probability of receiving a going-concern opinion. Following prior studies, we include LEVERAGE and CHGDT to capture default risk (e.g. Reynolds and Francis 2001; DeFond et al. 2002). Because firms with multiple-year negative net income are more likely to fail (e.g. Chen et al. 1992; Louwers 1998), we include PRLOSS. We expect positive associations between all financial distress variables and GC.

Large auditors have more quasi-rents at stake if there is a questionable audit (DeAngelo 1981). Thus large auditors may be more likely to issue going-concern opinions, although prior studies find inconsistent results (e.g. Mutchler et al. 1997; Behn et al. 2001; DeFond et al. 2002; Geiger and Rama 2003; Li 2009). Auditor size is measured as a dichotomous variable: Big N versus non-Big N. We expect a positive association between BIG N and GC. We include audit report lag (REPORTLAG) because prior research finds that going-concern companies are associated with longer reporting lags (McKeown et al. 1991; Mutchler et al. 1997). We expect a positive relationship between REPORTLAG and GC. In addition, we control for clients’ issuance of new equity in the following year because Behn et al. (2001) find auditors are less likely to issue going concern opinions if firms disclose they have plans to issue new equity. Thus, we expect a negative relationship between NEWDEBT and GC. Finally, we control for
prior going-concern status ($PRIORGC$) because it will be easier for auditors to issue
going-concern opinions if the firm has already received one in the prior year (Mutchler 1984). $PRIORGC$ is expected to be positively associated with $GC$. Table 2 summarizes the variables.

4.2.2. **Logistic regression results**

Table 4 reports the multivariate results for our Hypothesis 2 that auditors are less likely to issue going-concern opinions to firms releasing higher future earnings forecasts. The model is highly significant, with a pseudo $R^2$ of 43.7%. Consistent with H2, the coefficient on $FORECAST$ is significantly negative ($\chi^2 = 5.977$, $p$-value $< 0.05$), suggesting that when a firm’s earnings forecasts for year $t+1$ are high, the auditor is less likely to issue a going-concern opinion. Economically, when $FORECAST$ increases by one standard deviation, the auditor is one percent less likely to issue a going-concern opinion. Such an impact is large considering that only 3.6 percent of firm-years in our sample receive a going concern opinion.\(^7\) Thus, it appears that auditors take management forecast information into consideration when make going-concern decisions, which provides support for Hypothesis 2.

As for control variables, consistent with prior studies, smaller firms with higher leverage, longer audit reporting lag, and going-concern reports in the prior year are more likely to receive going-concern opinions, while firms issuing new debt in year $t+1$ are less likely to receive going-concern opinions.

To summarize, we find that managers are more likely to issue optimistic earnings forecasts when there is a higher probability that their firm will receive a going-concern意见。

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\(^7\) The largest impact on auditor going concern opinions comes from audit report lag, as one standard deviation increase in audit report lag increases the probability of issuing a going concern opinion by 2.5 percent.
opinion, consistent with the argument that managers bias their forecasts optimistically to avoid a going concern opinion. We also find that auditors are less likely to issue going-concern opinions when managers forecast higher earnings. In the following section, we investigate whether auditors are misled by optimistically biased forecasts, as specified in H3a and H3b.

4.3. Are Auditors Misled by Management Forecasts?

4.3.1 Management forecast credibility

In order to test H3a that auditors rely more on earnings forecasts issued by credible managers, we estimate the following logistic regression:

\[
\text{GC} = b_0 + b_1 \text{FORECAST} + b_2 \text{SIZE} + b_3 \text{PROBANKZ} + b_4 \text{LEVERAGE} + \\
b_5 \text{PRLOSS} + b_6 \text{CHGDT} + b_7 \text{BIG N} + b_8 \text{REPORTLAG} + \\
b_9 \text{NEWDEBT} + b_{10} \text{PRIORGC} + b_{11} \text{FORECAST} \times \text{PROPTIMISTIC} + \\
b_{12} \text{PROPTIMISTIC} + \text{Year Dummies} \tag{4}
\]

Where \text{PROPTIMISTIC}, a measure of management credibility, is equal to one if management misses its own forecasts in any of the prior two years, and zero otherwise.\(^8\)

We use this variable to measure the credibility because SAS No. 59 explicitly requires auditors to compare prospective financial information provided by managers in prior years with actual results when using the information. Moreover, we find that this prior forecast optimism is significantly related to year \(t+1\) forecast bias for \(\text{OPTIMISTIC}\). Specifically, the correlation between \text{PROPTIMISTIC} and \text{OPTIMISTIC} is 0.208 with a p-value less than one percent, suggesting that prior forecast optimism is informative to the forecast optimism for year \(t+1\). If auditors rely less on management forecasts with

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\(^8\) If managers issue multiple forecasts in the prior two years, we take the average. We use historical credibility instead of year \(t+1\) forecast bias because auditors do not have next period earnings information when evaluating a firm’s going concern status.
higher prior forecast optimism, as predicted by H3a, we expect the coefficient on the interaction between FORECAST and PROPTIMISTIC to be significantly positive. Table 5 reports the regression results. Consistent with H3a, the coefficient on this interaction term is 11.031, with p-value less than one percent, suggesting that auditors assign lower weight on forecasts issued by managers who have been optimistic in the prior two years. The sum of the coefficients of FORECAST and PROPTIMISTIC × FORECAST represents the effect of management forecasts for the year t+1 made by managers who have been less credible historically on auditors’ going concern decisions. The sum is significantly positive ($\chi^2 = 7.773$, p-value < 0.01). Thus, the results in Table 5 suggest that auditors significantly discount forecasts issued by less credible managers. Indeed, auditors are more likely to issue going concern opinions when those firms with historically less credible forecasts issue high forecasts for the next period.

In order to test H3b that the weight auditors assign to management forecasts when making going-concern decisions is significantly different from the weight on management forecasts implied in a bankruptcy prediction model, we first examine the prediction power of management forecasts on subsequent bankruptcy, and then compare the coefficient on management forecast (FORECAST) in the bankruptcy model with the coefficient on FORECAST in the going concern model, Model (3). If the coefficients on FORECAST from the two models are not significantly different from each other, then auditors are likely placing the correct weight on the information provided by management forecasts when make going concern decisions. The bankruptcy prediction model is the same as Model (3), except we replace the dependent variable GC with
BANKRUPT, which equals one if a firm files for bankruptcy in the two years following the auditor’s report, and is zero otherwise. The results, which are reported in Table 6, suggest that, as was the case in Model (3), FORECAST is significantly negative in the bankruptcy prediction model. Thus, firms are less likely to subsequently go bankrupt if their forecast numbers are high for year \( t + 1 \). More importantly, the coefficient of \( \text{FORECAST} \) (-2.103) in Table 6 is not significantly different from that in Table 4 (-2.185) \( (X^2 = 0.008, p\text{-value} = 0.927) \).

In summary, we find that auditors discount forecasts that are historically less credible, and are likely to place the right weight on management forecasts when making going concern decisions. Overall, our empirical evidence is consistent with the argument that auditors are not misled by management forecasts that are potentially optimistic.

------------------Insert Table 6 here------------------

6. Conclusions

This paper studies the relation between auditor going-concern opinions and management forecasts for financially distressed firms from 2000 to 2008. Using a rational expectation model as a framework, we examine both managers’ forecasting behavior and auditors’ reliance on management forecasts when make going concern decisions. Our empirical results show that managers of financially distressed firms are more likely to issue optimistically biased earnings forecasts as their firms are more vulnerable to a going-concern opinion. Turning to auditors’ behavior, even though they still use management forecasts in their going concern decision process, the auditors do not appear to be misled by the potential bias in management forecasts. Specifically, auditors discount less credible management forecasts significantly and assign the right
weight on management forecasts in their going-concern decision process when using subsequent bankruptcy as a benchmark. Thus, our overall results are consistent with a rational expectation’s equilibrium, which predicts that managers will attempt to manipulate forecasts to raise forecasted values, and that auditors will take this inflation into account when using the forecast information in their decision-making process.

Our study extends management forecast literature by documenting a new incentive that managers have to bias their forecasts - the possibility of receiving a going-concern opinion. Moreover, our study suggests that management forecasts are not only useful to investors and analysts as documented in the prior literature (e.g. Pownall, et al. 1993; Baginski and Hassell 1990), but are also informative to auditors. Our study also adds to auditor going-concern literature by documenting that management earnings forecasts could potentially affect going-concern decisions. More importantly, our study provides the new empirical evidence showing how auditors use management forecast information which is likely to be biased.
References


Figure 1 Timeline of the study

Management forward looking forecasts for year $t+1$ issued during this period

Fiscal period beginning date for year $t$

Fiscal period end date for year $t$

Date of the auditor’s report for year $t$
Table 1 Sample Selection Process

<table>
<thead>
<tr>
<th>Sample of financially distressed firms covered by Audit Analytics and Compustat from 2000 - 2008</th>
<th>Firm-year observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less: firms not covered by First Call</td>
<td>(5,035)</td>
</tr>
<tr>
<td>observations without necessary financial data from Compustat</td>
<td>(2,079)</td>
</tr>
<tr>
<td><strong>Final sample for calculating probability of receiving an going-concern opinion</strong></td>
<td><strong>20,384</strong></td>
</tr>
<tr>
<td>Less: observations without point or range annual forecasts issued before the audit report date from First Call</td>
<td>(16,271)</td>
</tr>
<tr>
<td>forecasts not for the next fiscal year</td>
<td>(3,049)</td>
</tr>
<tr>
<td><strong>Final sample for examining the association between management forecast and auditor going-concern opinions</strong></td>
<td><strong>1,064</strong></td>
</tr>
<tr>
<td>Less: observations without analyst data</td>
<td>(287)</td>
</tr>
<tr>
<td>observations without actual earnings data</td>
<td>(87)</td>
</tr>
<tr>
<td><strong>Final sample for examining the association between the predicted going-concern opinions and optimistic forecast</strong></td>
<td><strong>690</strong></td>
</tr>
</tbody>
</table>
Table 2 Descriptive statistics for going concern firms and non-going concern firms, optimistic forecast firms and non-optimistic forecast firms

<table>
<thead>
<tr>
<th></th>
<th>Mean OPTIMISTIC = 1</th>
<th>Mean OPTIMISTIC = 0</th>
<th>Mean GC = 1</th>
<th>Mean GC = 0</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>445</td>
<td>245</td>
<td>39</td>
<td>1025</td>
<td></td>
</tr>
<tr>
<td>FORECAST</td>
<td>0.003</td>
<td>0.039</td>
<td>-1.69*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PREDICTGC</td>
<td>0.057</td>
<td>0.040</td>
<td>3.17***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>6.268</td>
<td>6.173</td>
<td>0.67</td>
<td>5.453</td>
<td>5.957</td>
</tr>
<tr>
<td>PROBANKZ</td>
<td>-2.289</td>
<td>-2.482</td>
<td>1.10</td>
<td>-0.169</td>
<td>-2.419</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>0.535</td>
<td>0.517</td>
<td>0.86</td>
<td>0.723</td>
<td>0.516</td>
</tr>
<tr>
<td>PRLOSS</td>
<td>0.818</td>
<td>0.869</td>
<td>-1.75*</td>
<td>0.949</td>
<td>0.836</td>
</tr>
<tr>
<td>CHGDT</td>
<td>0.006</td>
<td>-0.014</td>
<td>2.32**</td>
<td>0.004</td>
<td>-0.003</td>
</tr>
<tr>
<td>BIG N</td>
<td>0.915</td>
<td>0.963</td>
<td>-2.43**</td>
<td>0.872</td>
<td>0.913</td>
</tr>
<tr>
<td>NEWEQUITY</td>
<td>0.899</td>
<td>0.906</td>
<td>-0.31</td>
<td>0.821</td>
<td>0.909</td>
</tr>
<tr>
<td>REPORTLAG</td>
<td>135.510</td>
<td>65.036</td>
<td>8.29***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRIORGC</td>
<td>0.231</td>
<td>0.006</td>
<td>12.51***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANALYSTS</td>
<td>1.633</td>
<td>1.672</td>
<td>-0.60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*, **, *** denote significance at .10, .05, and .01 respectively.

Variable definitions

GC = 1 if company receives a going-concern opinion in year t, 0 otherwise.
OPTIMISTIC = 1 if actual earnings is less than the management forecast, 0 otherwise.
FORECAST = management EPS forecast scaled by stock price at the end of year t.
PREDICTGC = the probability of receiving a going-concern opinion as estimated by Model (1).
SIZE = natural logarithm of client’s total sales at the end of the year t.
PROBANKZ = probability of bankruptcy score (Zmijewski 1984) measured at the end of the year t.
LEVERAGE = total liabilities divided by total assets at the end of the year t.
PRLOSS = an indicator variable equal to 1 if the company reported negative net income in year t-1, 0 otherwise.
CHGDT = the change in long-term debt divided by total assets from year t-1 to year t.
BIG N = an indicator variable equal to 1 if the auditor is Big 4 (5) at the end of the year t, 0 otherwise.
REPORTLAG = number of days between fiscal year-end and the auditor’s report signing date for year t.
NEWEQUITY = 1 if the company issues new equity in the subsequent year, 0 otherwise.
PRIORGC = 1 if company receives a going-concern opinion in year t-1, 0 otherwise.
ANALYSTS = the natural log of the number of analysts following the firm in year t.
Table 3 Regression Results of the Probability of Receiving a Going-Concern Opinion and Optimistically Biased Management Forecasts

<table>
<thead>
<tr>
<th>Variable</th>
<th>+/-</th>
<th>Coefficient</th>
<th>Chi-square</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td></td>
<td>0.662</td>
<td>0.572</td>
<td>0.450</td>
</tr>
<tr>
<td>PREDICTGC</td>
<td>+</td>
<td>12.010</td>
<td>8.111</td>
<td>0.002</td>
</tr>
<tr>
<td>SIZE</td>
<td>+</td>
<td>0.140</td>
<td>3.549</td>
<td>0.030</td>
</tr>
<tr>
<td>PROBANKZ</td>
<td>+</td>
<td>-0.127</td>
<td>2.517</td>
<td>0.113</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>+</td>
<td>-0.134</td>
<td>0.063</td>
<td>0.802</td>
</tr>
<tr>
<td>PRLOSS</td>
<td>+</td>
<td>-0.627</td>
<td>6.422</td>
<td>0.011</td>
</tr>
<tr>
<td>CHGDT</td>
<td>+</td>
<td>1.881</td>
<td>4.694</td>
<td>0.015</td>
</tr>
<tr>
<td>BIG N</td>
<td>-</td>
<td>-1.130</td>
<td>7.832</td>
<td>0.002</td>
</tr>
<tr>
<td>NEWDEBT</td>
<td>+</td>
<td>0.162</td>
<td>0.298</td>
<td>0.292</td>
</tr>
<tr>
<td>ANALYSTS</td>
<td>-</td>
<td>-0.062</td>
<td>0.255</td>
<td>0.307</td>
</tr>
</tbody>
</table>

Year Dummies Included

Total Obs. 690
Optimistic Obs. 445
Likelihood Ratio 50.591 <.0001
Pseudo $R^2$ 0.097

Note: p-values are one-tailed for signed expectations. Please see Table 2 for variable definitions.
Table 4 Regression Results of Auditor Going-Concern Opinions on Management Forecasts

<table>
<thead>
<tr>
<th></th>
<th>+/-</th>
<th>Coefficient</th>
<th>Chi-square</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td></td>
<td>-3.010</td>
<td>5.493</td>
<td>0.019</td>
</tr>
<tr>
<td>FORECAST</td>
<td>-</td>
<td>-2.185</td>
<td>5.977</td>
<td>0.007</td>
</tr>
<tr>
<td>SIZE</td>
<td>-</td>
<td>-0.198</td>
<td>2.135</td>
<td>0.072</td>
</tr>
<tr>
<td>PROBANKZ</td>
<td>+</td>
<td>0.051</td>
<td>0.886</td>
<td>0.173</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>+</td>
<td>2.256</td>
<td>8.725</td>
<td>0.001</td>
</tr>
<tr>
<td>PROLOSS</td>
<td>+</td>
<td>0.803</td>
<td>1.003</td>
<td>0.108</td>
</tr>
<tr>
<td>CHGDT</td>
<td>+</td>
<td>1.554</td>
<td>1.424</td>
<td>0.101</td>
</tr>
<tr>
<td>BIG N</td>
<td>+</td>
<td>-0.570</td>
<td>0.636</td>
<td>0.425</td>
</tr>
<tr>
<td>REPORTLAG</td>
<td>+</td>
<td>0.013</td>
<td>40.485</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>NEWDEBT</td>
<td>-</td>
<td>-0.760</td>
<td>1.979</td>
<td>0.080</td>
</tr>
<tr>
<td>PRIORGC</td>
<td>+</td>
<td>4.569</td>
<td>34.988</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Year Dummies</td>
<td></td>
<td>Included</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Obs. 1064
GC Obs. 39
Likelihood Ratio 137.259 <.0001
Pseudo R² 0.437

Note: p-values are one-tailed for signed expectations.
Please see Table 2 for variable definitions.
Table 5 Regression Results of Auditor Going-Concern Opinions on Management Forecast Conditioning on Prior Optimistic Forecasts

<table>
<thead>
<tr>
<th></th>
<th>+/-</th>
<th>Coefficient</th>
<th>Chi-square</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td></td>
<td>-5.258 5.491</td>
<td>0.019</td>
<td></td>
</tr>
<tr>
<td>FORECAST</td>
<td>-</td>
<td>-4.447 7.773</td>
<td>0.002</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>-</td>
<td>0.101 0.251</td>
<td>0.616</td>
<td></td>
</tr>
<tr>
<td>PROBANKZ</td>
<td>+</td>
<td>0.323 6.657</td>
<td>0.005</td>
<td></td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>+</td>
<td>2.425 2.486</td>
<td>0.008</td>
<td></td>
</tr>
<tr>
<td>PRLOSS</td>
<td>+</td>
<td>0.670 0.408</td>
<td>0.261</td>
<td></td>
</tr>
<tr>
<td>CHGDT</td>
<td>+</td>
<td>1.302 0.339</td>
<td>0.560</td>
<td></td>
</tr>
<tr>
<td>BIG N</td>
<td>+</td>
<td>2.177 1.687</td>
<td>0.194</td>
<td></td>
</tr>
<tr>
<td>REPORTLAG</td>
<td>+</td>
<td>0.015 0.251</td>
<td>0.598</td>
<td></td>
</tr>
<tr>
<td>NEWDEBT</td>
<td></td>
<td>0.518 0.278</td>
<td>0.794</td>
<td></td>
</tr>
<tr>
<td>PRIORGC</td>
<td>+</td>
<td>5.078 23.218</td>
<td>&lt;.001</td>
<td></td>
</tr>
<tr>
<td>PROPTIMISTIC</td>
<td>?</td>
<td>0.202 0.068</td>
<td>0.794</td>
<td></td>
</tr>
<tr>
<td>FORECAST × PROPTIMISTIC</td>
<td>+</td>
<td>11.031 7.923</td>
<td>0.002</td>
<td></td>
</tr>
</tbody>
</table>

Year Dummies Included

Total Obs. 728
GC Obs. 23
Likelihood Ratio 101.668 <.0001
Pseudo R² 0.533

Note: p-values are one-tailed for signed expectations, and two-tailed for unsigned expectations. Please see Table 2 for variable definitions.
Table 6 Regression Results of Subsequent Bankruptcy on Management Forecast

<table>
<thead>
<tr>
<th></th>
<th>+/-</th>
<th>Coefficient</th>
<th>Chi-square</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td></td>
<td>-2.921</td>
<td>8.041</td>
<td>0.005</td>
</tr>
<tr>
<td>FORECAST</td>
<td>-</td>
<td>-2.103</td>
<td>5.479</td>
<td>0.009</td>
</tr>
<tr>
<td>SIZE</td>
<td>-</td>
<td>0.036</td>
<td>0.090</td>
<td>0.764</td>
</tr>
<tr>
<td>PROBANKZ</td>
<td>+</td>
<td>0.109</td>
<td>5.105</td>
<td>0.012</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>+</td>
<td>1.914</td>
<td>7.627</td>
<td>0.003</td>
</tr>
<tr>
<td>PRLOSS</td>
<td>+</td>
<td>-0.376</td>
<td>0.599</td>
<td>0.439</td>
</tr>
<tr>
<td>CHGDT</td>
<td>+</td>
<td>0.850</td>
<td>0.305</td>
<td>0.290</td>
</tr>
<tr>
<td>BIG N</td>
<td>+</td>
<td>-0.856</td>
<td>1.994</td>
<td>0.158</td>
</tr>
<tr>
<td>REPORTLAG</td>
<td>+</td>
<td>0.010</td>
<td>25.819</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>NEWDEBT</td>
<td>-</td>
<td>-0.503</td>
<td>1.162</td>
<td>0.140</td>
</tr>
<tr>
<td>PRIORGC</td>
<td>+</td>
<td>0.080</td>
<td>0.005</td>
<td>0.473</td>
</tr>
</tbody>
</table>

Year Dummies Included

Total Obs. 1064  
Bankruptcy Obs. 41  
Likelihood Ratio 65.499 <.0001  
Pseudo R² 0.214

Note: p-values are one-tailed for signed expectations. Please see Table 2 for variable definitions.